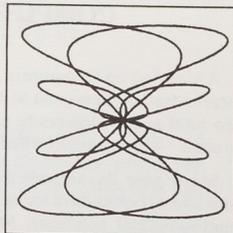


THE LONDON MATHEMATICAL SOCIETY NEWSLETTER



No. 128

April 1986

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Advertising: Susan Oakes, LMS Office, Burlington House, Piccadilly, London W1V 0NL. Tel: 01-437 5377.

The *Newsletter* is published monthly, except in August and September. Items for inclusion (with the exception of advertising material) should be sent to the Editor, to arrive before the tenth day of the month prior to publication. Advertisements, and general enquiries about the Society, should be addressed to Susan Oakes at the LMS Office.

Forthcoming Meetings

Friday 16 May 1986, Burlington House
(J. A. Green, D. Segal)

Friday 20 June 1986, Burlington House
(J. D. Murray, M. A. R. Koehl)

Friday 17 October 1986, Burlington House
(Meeting on Quasi-Crystals)

Friday 21 November 1986, Royal Society
(The President, J. R. Hubbuck)

VISIT OF PROFESSOR R. GEOGHEGAN

Professor Ross Geoghegan (SUNY, currently at IHES) will visit this country from 22-29 April 1986. He will lecture at Cardiff, Bangor and Liverpool, with the title: *Analogies between certain groups of homeomorphisms of the circle and discrete subgroups of Lie groups.*

The lectures will take place as follows:

Tuesday 22 April, CARDIFF, at 4.00 p.m.

Friday 25 April, BANGOR, at 2.30 p.m.

Monday 28 April, LIVERPOOL, at 4.00 p.m.

Anyone interested is warmly welcome to attend, but should confirm the time and place with the department concerned before travelling.

TOPOLOGY - BRAZIL

The Fifth Brazilian Conference on Topology will take place at The Universidade de Sao Paulo, Brazil from 7-17 July 1986. Further details may be obtained from: Paulo F. S. Porto Jr., Instituto

de Ciencias Matematicas de Sao Carlos, Universidade de Sao Paulo, Caixa Postal 668, 13.560 - Sao Carlos - SP - Brasil.

COMPUTERS, MATHEMATICAL SCIENCES AND HIGHER EDUCATION

A Meeting on *Computers in the teaching of the Mathematical Sciences in Higher Education* will be held at the University of Kent at Canterbury from 2 - 4 September 1986.

Many new developments are taking place in the use of computers for teaching aspects of the mathematical sciences. Most notable are the programs for Computational Mathematics and Statistics but software for Applied Mathematics and for Pure Mathematics is also being written. In addition much work is also being done to develop software for teaching mathematics to scientists and engineers. Some software is being designed for lecture demonstration; some is being written to accompany texts and some is

being written in the form of integrated packages running on a network.

A meeting is to be held to discuss, and wherever possible, to demonstrate these developments. Generous periods of time will be allocated in the programme for participants to look at the demonstrations and to exchange ideas with others working in the same area.

For further information contact: Dr. G. J. Makinson, School of Mathematical Studies, University of Kent at Canterbury, Canterbury, Kent. CT2 7NZ. Prestel Mailbox 022766822, JANET address gojm@uk.ac.ukc.

POPULAR LECTURES

The 1986 Popular Lectures will be given by Professor W. Ledermann, on *The Rise and Fall of Matrices*, and by Professor J. Maynard Smith on *Games Animals Play*.

Professor Ledermann will discuss the historical succession of emphases in the field of linear algebra, from determinants to matrices and then to linear mappings, and its mathematical

implications. Professor Maynard Smith will speak on mathematical models of evolution via animal behaviour.

The lectures will be at the University of Leeds, on 27 June 1986, and at Imperial College, London on 4 July 1986. Each session will as usual begin at 7.30 p.m.

DEFORMATION THEORY

A NATO Advanced Study Institute meeting on *Deformation Theory (of Algebras) and Applications* will be held 1-14 June at Il Ciocco, Castelvecchio-Pascoli, Italy.

The basic aim of this ASI is to present deformation theory in all its aspects as a coherent well-defined field inclusive applications, with as a central core the deformation of algebras.

Deformation (and perturbation) theory, or, more generally, interest in families of structures rather than single ones, is a striking feature in much of modern mathematics and its applications. This "trend" manifests itself in many different parts of mathematics. This ASI embodies an attempt towards surveying and unifying parts of this with as a central core the deformation theory of algebras.

The topics to be covered are: Deformation theory of algebras, nonstandard tools in deformation theory, deformations of geometric and complex structures, deformations of singularities, the deformation theoretic approach to quantization, deformations and integrable systems, deformations of operator algebras, canonical form problems.

A five page description of the motivations behind this ASI is available upon request.

There is a strictly limited amount of funds available for support of participants from NATO

countries, who have no other support. This applies especially to young Ph.D's and similarly situated persons. Requests for support should be included with the application form and state reasons and amount requested.

The Scientific Advisory Committee consists of: D. C. Spencer, *Durango, Colorado*; A. Lichnerowicz, *Collège de France*; H. Grauert, *Göttingen*; G. Reeb, *Strasbourg*; F. Calogero, *Rome*; M. Gerstenhaber, *Pennsylvania*; M. Hazewinkel, *CWI, Amsterdam*. Most of these persons will also serve as main lecturers.

The invited speakers are: M. Goze, *Mulhouse*; J. M. Anchochea-Bermudez, *Madrid*; E. Christensen, *Copenhagen*; J. Ringrose, *Newcastle upon Tyne*; D. Babbitt, *UCLA, Los Angeles*; V. S. Varadarajan, *UCLA, Los Angeles*; M. De Wilde, *Liège*; P. B. A. Lecomte, *Liège*; H. Goldschmidt, *Columbia Nice*; R.-O. Buchweitz, *Hannover*; J. J. Wavrik, *UCSD, San Diego*; R. Hermann, *ASPM, Brookline, Massachusetts*; J. Taborda-Duarte, *CFMC, Lisbon*; R. Vilela Mendes, *CFMC, Lisbon*; T. C. Bountis, *Clarkson College, Potsdam, N.Y./Athens*; M. Flato, *Dijon*; R. Rochberg, *St. Louis*;

Further details may be obtained from Prof. Dr. Michiel Hazewinkel, NATO-ASI Deformation Theory, C.W.I., P.O. Box 4079, 1009 AB Amsterdam, The Netherlands.

MATHEMATICAL REVIEWS

EXECUTIVE EDITOR

Applications and nominations are invited for the position of Executive Editor of Mathematical Reviews (MR). The appointment will be for a negotiable period of from two to five years, with the possibility of renewal, and should commence not later than September 1, 1986.

The MR editorial office is located in Ann Arbor, Michigan, near the campus of the University of Michigan, and the editors enjoy many faculty privileges at the university. MR employs eleven editors, about a dozen consultants, and over fifty other full-time personnel. It publishes *Mathematical Reviews*, *Current Mathematical Publications*, special review volumes and various indexes, as well as creating the database from which these publications and the online service MathSci are produced.

The Executive Editor is responsible for all phases of the operations at MR. These include the following general areas: (1) direction of the editorial and consulting staff and of the administrative noneditorial staff; this includes determining and maintaining work and printing schedules for all publications; (2) relations with reviewers and authors as well as recruiting new reviewers; (3) maintaining scientific and editorial standards, acquiring reviewable material, and implementing general editorial policy; (4) budget planning and control, assisting the Editorial Committee in formulating editorial policy and long-range plans, and directing the implementation of new policies and procedures, including changes in computer facilities and electronic publishing techniques.

The Executive Editor works in close co-operation with the Executive Director of the American Mathematical Society.

In view of these responsibilities, the Executive Editor needs skill as an administrator and personnel manager, broad competence in mathematics, facility with the English language, interest in bibliographic work, familiarity with computers, and the freedom to do a substantial amount of travel. Credentials as a research mathematician are desirable. However, the Executive Editor should not expect to carry on a large research program while holding this position.

Applications will be welcomed from persons taking leave of absence from other positions, except for leaves entailing commitment of time to other activities.

The twelve-month salary is negotiable, and will be commensurate with the experience the applicant brings to the position. Retirement and insurance plans and other fringe benefits are similar to those in universities; of special importance is a policy providing study leave and termination pay after the incumbent has held the position at least two years.

The Executive Editor reports to the MR Editorial Committee and the Board of Trustees of the American Mathematical Society. Final administrative responsibility rests with the Board of Trustees.

Nominations and applications (including curriculum vitae, bibliography, data on experience, and names and addresses of three or more references) should be sent to Professor Melvin Hochster, Mathematics Department, University of Michigan, Ann Arbor, Michigan 48109-1003 (telephone 313-764-0326; messages may be left at 313-764-0335). Applications received by April 25, 1986 will be assured of consideration.

Mathematical Reviews is an equal opportunity employer.

MATHEMATICAL WHO'S WHERE 1968/7

Copies of the new edition of this booklet can be obtained from Professor I. M. James, Mathematical Institute, 24-29 St Giles, Oxford, OX1 3LB.

The price is £1 per copy including postage if the order is accompanied by payment; cheques should be made out to I. M. James.

It is regretted that the following names were omitted from or misplaced in the new edition:

Dr. Abakuks, Statistics, Birkbeck

Dr. C. P. Chalmers, Statistics, Birkbeck

*Professor P. Holgate, Statistics, Birkbeck

Dr. J. Leslie, Statistics, Birkbeck
Sir John Kingman (Vice-Chancellor), Bristol

Dr. P. J. Rippon, Mathematics, Open

Dr. J. R. Ockendon, Mathematics, Oxford

Dr. S. Bullett, Mathematics, Queen Mary

*Professor H. B. Griffiths, Mathematics, Southampton

Dr. W. Kendall, Mathematics, Strathclyde

Professor W. K. Hayman, Mathematics, York.

* Indicates Head of Department.

RECIPROCITY

The London Mathematical Society has reciprocity agreements with the following Societies. Further details and application forms may be obtained from the addresses shown except those marked * in which case please apply to S. M. Oakes at the LMS Office.

American Mathematical Society

P.O. Box 6248, Providence, RI 02940, U.S.A.

Australian Mathematical Society

c/o Dr. W. R. Bloom, School of Mathematical and Physical Sciences, Murdoch University, Murdoch, WA 6153, Australia.

Societe Mathematique de Belgique

c/o Professor G. Hirsch, Avenue Charles Woeste 317-Bte 11, B-1090 Brussel, Belgium.

Canadian Mathematical Society

577 King Edward Ave., Ottawa, Ontario, Canada K1N 6N5.

Dansk Matematisk Forening

H. C. Orsted Institut, Universitetsparken 5, DK-2100, Kobenhavn 0, Denmark.

Deutsche Mathematiker Vereinigung

Prof. Dr. K. P. Grottemeyer, Universitat Bielefeld, Universitatsstrasse 25, 4800 Bielefeld 1, West Germany.

Societe Mathematique de France *

B.P. 126-05, 75226 Paris Cedex 05, France.

Indian Mathematical Society

The Secretary, Dept. of Mathematics, Jadavpur University, Jadavpur, West Bengal, India.

Unione Matematica Italiana *

Professor P. L. Papini, The Secretary, Dipartimento di Matematica, Universita, Piazza Porta S. Donata 5, 40127 Bologna, Italy.

New Zealand Mathematical Society

Dr. M. D. E. Conder, The Secretary, NZMS, Dept of Mathematics and Statistics, University of Auckland, Private Bag, Auckland, New Zealand.

Nigerian Mathematical Society*

c/o Professor A. Olubummo, Dept. of Mathematics, University of Ibadan, Ibadan, Nigeria.

Norsk Matematisk Forening

Matematisk Institutt, P.O. Box 1053, Blindern, Oslo 3, Norway.

South East Asian Mathematical Society

Mark Tamathai, Secretary, SEAMS, Dept of Philosophy, Chulalongkorn University, Bangkok 10500, Thailand.

Svenska Matematikersamfundet

Secretary, Dept of Mathematics, University of Stockholm, Box 6701, 113 85 Stockholm, Sweden.

Wiskundig Genootschap

Secretary, Department of Mathematics and Informatics, University of Technology, P.O. Box 356, 2600 AJ Delf, The Netherlands.

GEORGE POLYA (1887 - 1985)

The Society has received a gift of \$10,000 in memory of George Polya, Honorary Member of the Society, who died on 7 September 1985.

Council has expressed the deep gratitude of the Society to his widow Stella Polya and will be considering the use of the gift at its meeting in June 1986. Suggestions from members of the

Society will be welcome.

In addition the Society in association with the University of Birmingham is organising a conference entitled *Inequalities; Fifty years on from Hardy, Littlewood and Polya* to be held in Birmingham in July 1987.

R. L. E. Schwarzberger

French publisher seeks trained mathematician in algebraic topology for translation from French to English of a 300 pages high standard book.

Please send references and requirements to Hermann 293 rue Lecourbe 75015 Paris.

We wish to purchase runs and odds of: Sphinx (Revue Mensuelle des Questions Recreatives), Journal of Recreational Mathematics, Journal of Number Theory, Mathematical Tables and Other Aids to Computation (issued later as Mathematics of Computation). Also books in all fields of mathematics including some school text-books, also biographies of mathematicians. Any date any language. We will buy a single book or a whole library. A list of books that we are interested in purchasing will be sent on request. We also specialise in selling books in this field and will be pleased to receive your list of books wanted and to send you our current catalogue on request.

**F. E. Whitehart,
Antiquarian Bookseller,
40 Priestfield Road
Forest Hill,
LONDON SE23 2RS.**

UNIVERSITY COLLEGE OF SWANSEA

Chair of Mathematics

Applications are invited for appointment to one of the two established Chairs in the Department of Mathematics, from a date to be arranged. Applicants should have teaching and research interests in pure or applied mathematics.

Further particulars may be obtained from the Personnel Office, University College of Swansea, Singleton Park, Swansea, SA2 8PP, to which office applications (**15 copies**) should be sent by **Monday, 21 April, 1986**

ASTERISQUE

numero hors serie

ELIE CARTAN ET LES MATHEMATIQUES D'AUJOURD'HUI

This special issue of the Journal Asterisque is devoted to the proceedings of the joint CNRS-NSF seminar on "The mathematical heritage of Elie Cartan". It was held in June 1984 in Lyon (France). Special support for publication has been granted by the Centre National de la Recherche Scientifique.

This conference was centered around important areas of contemporary research in mathematics and mathematical physics in which Elie Cartan pioneered.

Indeed today, by its depth, variety and great originality, Elie Cartan's work appears as a turning point in the evolution of geometry. Many concepts that he introduced, foresaw or developed (such as symmetric spaces, fibre bundles or connections, ...) play a central role in many different branches of mathematics.

The variety of subjects treated in the articles strongly makes this point since domains as different as the theory of systems of PDEs, (Lie) group theory, Riemannian geometry, symplectic mechanics, and general relativity are approached.

17,5 x 24 cm / 444 pages / RELIE, COUSA

PRIX SPECIAL DE LANCEMENT jusqu'au 30 juin 1986 300FF (Postage paid).

PLEASE ORDER DIRECT TO SOCIETE MATHEMATIQUE DE FRANCE, B.P. 126-05, 75226 PARIS CEDEX 05. Every order should be accompanied by corresponding remittance (by international money order or Unesco Book coupon, or personal cheque).

AN INVITATION TO THE NOMINATION FOR THE KING FAISAL INTERNATIONAL PRIZE IN SCIENCE

The General Secretariat of the King Faisal International Prize, in Riyadh, Kingdom of Saudi Arabia, has the honour to invite the Universities, Academies, Educational Institutions and Research Centers all over the world to nominate qualified candidates for the King Faisal International Prize in science which will be awarded in **1407 AH. i.e. 1987 AD.**

- (a) The topic of the prize will be **"MATHEMATICS"**.
 - (b) Selection will be decided by a Committee consisting of national and international assessors selected by the Board of King Faisal International Prize.
 - (c) More than one person may share the prize.
 - (d) The Winners' names will be announced in **December 1986**, and the prize will be awarded in an official ceremony to be held for that purpose in Riyadh, Kingdom of Saudi Arabia.
 - (e) The Prize consists of:
 1. A certificate in the name of the winner containing an abstract of the work that qualified him/her for the prize.
 2. A precious medal.
 3. A sum of three hundred and fifty thousand Saudi Riyals (S.R. 350,000).
 - (f) The following conditions must be fulfilled:
 1. A nominee must have accomplished outstanding academic work in the subject of the prize, leading to the benefit of mankind and enrichment of human thought.
 2. The prize will be awarded for specific original research but the nominee's complete works will be taken into account.
 3. The works submitted with the nominations must have been published.
4. The specific works submitted must not have been awarded a prize by any international educational institution, scientific organization, or foundation.
 5. Nominations must be submitted by leading members of recognised educational institutions and of world-fame such as Universities, Academies and Research Centers. Nominations from other individuals and political parties will not be accepted.
 6. Nominations must give full particulars of the nominee's academic background, experience and publications, as well as copies of his/her educational certificates, if available. Three 6 x 9cm photographs, full address and Telephone number of the nominee are also requested.
 7. The nominations and selected publications (**ten copies**) are to be sent by registered air mail to the address stated in (10) below.
 8. The latest date for receipt of the full nominations with copies of works is the **4th of Dhu Al-Hijjah 1406 AH. i.e. the 9th of August 1986 AD.** The nomination papers received after this date will not be considered unless the subject of the prize is postponed to the following year.
 9. No nominations papers or works will be returned to the senders.
 10. Enquiries should be made, and nominations should be sent, to the Secretary General of the King Faisal International Prize, P.O. Box 22476, Riyadh 11495, Kingdom of Saudi Arabia, Telex 204667 PRIZE SJ.

PROFESSOR E. H. LIEB

The following are the titles of lectures to be given by Professor E. H. Lieb (Princeton University) during a visit for which the Programme Committee of the LMS has given financial support.

Monday 28 April, Queen Mary College, London (Physics Department). *A model for crystallisation - a variant of the Hubbard model.*

Wednesday 30 April, King's College (Mathematics Department). *Harmonic maps with*

prescribed singularities in three dimensions.

Friday 2 May, Heriot-Watt University (Mathematics Department). *Stability of atoms in molecules.*

Confirmation of the dates and further details of the visit may be obtained from Professor E. B. Davies, Department of Mathematics, King's College, Strand, London WC2R 2LS. Telephone 01-836 5454 (Ext. 2698).

GROUPS IN GALWAY

A weekend conference on Group Theory will be held at University College, Galway, Ireland on 9-10 May 1986. The speakers will include C. M.

Campbell (St. Andrews) and J. J. Rotman (Illinois). Further information may be obtained from R. S. Dark, University College, Galway, Ireland.

CAN YOU MAKE THE GRADE?

The following questionnaire provides an analysis which will show you why you are or are not a Professor. It is based on a careful statistical analysis using a microcomputer. To enable the most accurate analysis it is preferable to carry out the test under the supervision of a time keeper as you have limited time to complete it. You may like to photocopy this *Newsletter* before starting.

Follow the directions carefully — you have three minutes starting from NOW.

1. Read everything before you do anything.
2. Put your name in here
.....
3. Circle the word 'name' in the sentence above.
4. Write down 5 terms of a Fibonacci sequence in the space below:

5. Draw a circle around each of the numbers in your sequence.
6. Sum the terms of the sequence and write the answer here.
7. Shout out the answer.
8. Draw a circle around the word 'sequence' in sentence 4.
9. If you think you have followed the directions carefully shout out "I have followed all directions carefully".
10. When you have finished reading carefully, do only sentence 1 and 2.
11. Punch three holes here.
12. Tear up this *Newsletter* into 5 equal sized pieces and send 4 of the pieces to the *Newsletter* editor.

QUAID-I-AZAM UNIVERSITY PRE-PRINT SERIES

The Department of Mathematics, Quaid-i-Azam University has started a Pre-print series for quick dissemination of research of the faculty. The pre-print series is available on exchange basis with

publications/journals published by other institutions. For further information please contact Dr. Ismat Beg, Department of Mathematics, Quaid-i-Azam University, Islamabad, Pakistan.

VISITS TO U.S.S.R.

Dorothy Hirsch of the Committee of Concerned Scientists invites anyone who plans to visit Scientific Institutions in the U.S.S.R. to write to

her at 330 Seventh Ave., Suite 608, New York, N.Y. 10001, for a free travel pack containing information on Refusniks within the Soviet Union.